

ABSTRACT OF THE DISCLOSURE

A signal processing apparatus receives digital signals that are continuously related and input sequentially, performs a predetermined operation on each of sequentially input digital signals, and outputs a result of the operation. The signal processing apparatus includes a high-order part extractor for extracting a necessary high-order part by rounding off a result of the operation performed on the input digital signal, a difference calculator for calculating the difference between the result of the operation performed and the high-order part extracted by the high-order part extractor, and a feedback unit for adding the difference value calculated by the difference calculator to a next input digital signal. In this digital signal processing apparatus, signals are processed without causing significant degradation in smoothness or frequency characteristics, even if the bit length of the input digital signal is reduced via the processing.